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BEFORE THE ARIZONA CORPORATION COMMISSION

RECEIVED

Arizona Corporation Commission

DOCKETED

JUL 23 2009

COMMISSIONERS

KRISTIN K. MAYES - Chairman

GARY PIERCE

PAUL NEWMAN

SANDRA D. KENNEDY

BOB STUMP

2009 JUL 29 P 3: 03

AZ CORP COMMISSION
DOCKET CONTROL

DOCKETED BY

IN THE MATTER OF THE APPLICATION OF
THE BURLINGTON NORTHERN & SANTA
FE RAILWAY COMPANY FOR APPROVAL
TO INSTALL ADDITIONAL WARNING
DEVICES AT THE STEVES AND FANNING
RAILROAD CROSSINGS.

DOCKET NO. RR-02635B-09-0075

**STAFF'S NOTICE OF FILING
AFFIDAVIT OF CHRIS WATSON**

During the July 8, 2009 hearing in the above captioned matter, Administrative Law Judge Sarah Harpring directed Railroad Safety Section Staff ("Staff") to file as late filed exhibits (1) An assessment of the U.S. DOT Crossing inventory forms for the crossings at San Francisco Street, DOT # 025-132-G, Beaver Street, DOT # 025-133-N, Enterprise Avenue, DOT # 025-131-A, Steves Boulevard, DOT # 025-099-J, and Fanning Drive, DOT # 025-129-Y, and to determine their accuracy; and (2) A print out of the Federal Railroad Administration Quiet Zone Calculator result for a New Quiet Zone to include all five crossings including the Supplemental Safety Measures ("SSM's") that are being used by the City.

Staff hereby provides notice of filing the attached affidavit of Chris B. Watson. As explained in Mr. Watson's affidavit, Staff believes that the ADOT inventories are incorrect to the extent that they reflect that the one-way streets that have gates are protected by full quadrant gates or barriers. As explained in the attached affidavit, it is Staff's understanding that the Federal Railroad Administration ("FRA") does not consider one-way streets with gates to be full quadrant gates or barriers.

Also explained in Mr. Watson's affidavit is the calculation Staff performed using the FRA Quiet Zone Calculator. Explained therein are the assumptions Staff utilized in performing the calculations and the results based on each variation in the assumptions.

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1 RESPECTFULLY submitted this 29th day of July, 2009.

2 

3
4 Charles H. Hains, Attorney
5 Amanda Ho, Attorney
6 Legal Division
7 1200 West Washington Street
8 Phoenix, Arizona 85007
9 (602) 542-3402

10 Original and thirteen (13) copies
11 of the foregoing were filed this
12 29th day of July, 2009 with:

13 Docket Control
14 Arizona Corporation Commission
15 1200 West Washington Street
16 Phoenix, Arizona 85007

17 Copies of the foregoing mailed this
18 29th day of July, 2009 to:

19 Randy Whitaker, Senior Project Manager
20 Traffic Engineering
21 City of Flagstaff
22 City Hall
23 211 West Aspen Avenue
24 Flagstaff, Arizona 86001

25 Melvin V. Thomas, Manager Public Projects
26 BNSF Railway Company
27 740 East Carnegie Drive
28 San Bernardino, California 92408-3571

Robert Travis, PE, State Railroad Liaison
Utilities & Railroad Engineering Section
Arizona Department of Transportation
205 South 17th Avenue, Mail Drop 618E
Phoenix, Arizona 85007

Traffic Records Section
Arizona Department of Transportation
206 South 17th Avenue, Mail Drop 064R
Phoenix, Arizona 85007

David Womochil
Flagstaff City Attorney's Office
211 West Aspen Avenue
Flagstaff, Arizona 86001-5359

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1 **BEFORE THE ARIZONA CORPORATION COMMISSION**

2 **COMMISSIONERS**

3 KRISTIN K. MAYES - Chairman
4 GARY PIERCE
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6 SANDRA D. KENNEDY
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8 IN THE MATTER OF THE APPLICATION OF
9 THE BURLINGTON NORTHERN & SANTA
10 FE RAILWAY COMPANY FOR APPROVAL
11 TO INSTALL ADDITIONAL WARNING
12 DEVICES AT THE STEVES AND FANNING
13 RAILROAD CROSSINGS.

DOCKET NO. RR-02635B-09-0075

AFFIDAVIT OF CHRIS WATSON

14 Chris B. Watson, being first duly sworn upon his oath, states as follows:

15 I am over the age of eighteen, and I have personal knowledge of the facts stated herein.

16 1. I am employed by the Arizona Corporation Commission ("Commission") Safety Division, as
17 the Assistant Supervisor and grade-crossing inspector. I am responsible for overseeing all
18 public grade crossings in the State of Arizona.

19 2. The City of Flagstaff wishes to eliminate train horn noise at five major railroad crossings
20 within the City limits. Pursuant to this objective, the City has initiated the process to create a
21 Quiet Zone at those crossings.

22 3. On July 8, 2009, a full evidentiary hearing was held at the Commission offices in Phoenix.
23 At the conclusion of the hearing, Staff was instructed to file late-filed exhibits, to include:

- 24
- 25 • An assessment of the U.S. DOT Crossing inventory forms for the crossings at San
 - 26 Francisco Street, DOT # 025-132-G, Beaver Street, DOT # 025-133-N, Enterprise
 - 27 Avenue, DOT # 025-131-A, Steves Boulevard, DOT # 025-099-J, and Fanning Drive,
 - 28 DOT # 025-129-Y, and to determine if they are correct or not; and

- A print out of the Federal Railroad Administration Quiet Zone Calculator result for a New Quiet Zone to include all five crossings including the Supplemental Safety Measures (“SSM’s”) that are being used by the City.

4. Attachment “A” is a set of printouts of the U.S. DOT inventory forms from the FRA website for all five of the proposed Quiet Zone crossings. Staff takes exception to three of the U.S. DOT crossing forms. Each of the inventory forms for San Francisco Street, Beaver Street, and Enterprise Avenue, state that the crossings are equipped with “4 quad or Full Barrier” gates. This information is incorrect. It is my opinion that the inventory forms will need to be corrected with the U.S.DOT before the Quiet Zone can go into effect. My opinion is informed by an email from Robert Travis of the Arizona Department of Transportation in which Mr. Travis explains that while, in the past, a one-way street with full gates would be considered equivalent to either full quadrant gates or barriers, that the Federal Railroad Administration does not consider them to be equivalents. A copy of the email is attached as Attachment “B”.

5. Attachment “C” is a printout of the FRA Quiet Zone Calculator calculation performed by Staff. Staff ran the Calculator using all five crossings proposed in the Quiet Zone. The first printout considered the five crossing scenario without any SSM’s applied to the Quiet Zone, and it does not qualify as a Quiet Zone. The second print out is of the same scenario, but treats the one-way street option as an SSM for San Francisco Street, but it still does not qualify for a Quiet Zone. The third print out is the same scenario again, but with the one-way street SSM option applied to both San Francisco Street and Beaver Street. In this scenario, the Quiet Zone Risk Index (80332.91) falls below the Risk Index with Horns (83442.06), qualifying the scenario for Quiet Zone Status.

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1 6. Further affiant sayeth not.
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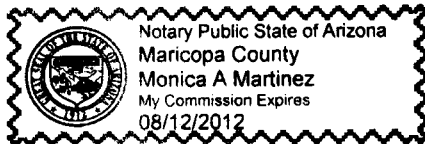
4 

Chris B. Watson

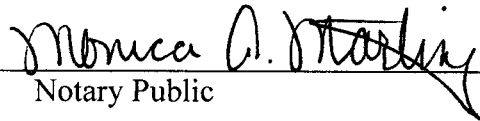
Assistant Supervisor, Railroad Safety Section

5
6
7 SUBSCRIBED AND SWORN TO before me this 29TH day of July, 2009 by

8 Chris B. Watson.



11 By


Notary Public

12 My Commission Expires:

13 August 12, 2012
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ATTACHMENT A

**U.S. DOT - CROSSING INVENTORY INFORMATION
AS OF 7/22/2009**

Crossing No.: **025133N** Update Reason: **Changed Crossing** Effective Begin-Date of Record: **08/17/06**
Railroad: **BNSF BNSF Rwy Co. [BNSF]** End-Date of Record:
Initiating Agency **Railroad** Type and Position: **Public At Grade**

Part I Location and Classification of Crossing

Division:	SOUTHWEST	State:	AZ
Subdivision:	SELIGMAN	County:	COCONINO
Branch or Line Name:	E WINSL-NEEDLES	City:	In FLAGSTAFF
Railroad Milepost:	0344.29	Street or Road Name:	BEAVER ST
Railroad I.D. No.:	7200	Highway Type & No.:	FAU9023
Nearest RR Timetable Str:	FLAGSTAFF	HSR Corridor ID:	
Parent Railroad:		County Map Ref. No.:	41
Crossing Owner:		Latitude:	35.1975351
ENS Sign Installed:		Longitude:	-111.6504212
Passenger Service:	AMTRAK	Lat/Long Source:	Actual
Avg Passenger Train Count:	2	Quiet Zone:	No
Adjacent Crossing with Separate Number:			

Private Crossing Information:

Category:		Public Access:	Unknown
Specify Signs:		Specify Signals:	
ST/RR A	ST/RR B	ST/RR C	ST/RR D
Railroad Use:			
State Use:			
Narrative:			

Emergency Contact: **(800)832-5452** Railroad Contact: **(913)551-4540** State Contact:

Part II Railroad Information

Number of Daily Train Movements:		Less Than One Movement Per Day:	No
Total Trains: 93	Total Switching: 0	Day Thru:	47
Typical Speed Range Over Crossing: From 1 to 45 mph		Maximum Time Table Speed:	45
Type and Number of Tracks: Main: 2 Other: 0		Specify:	
Does Another RR Operate a Separate Track at Crossing?	No		
Does Another RR Operate Over Your Track at Crossing?	Yes: ATK		

U.S. DOT - CROSSING INVENTORY INFORMATION

Crossing **025133N**

Continued

Effective Begin-Date of Record: **08/17/06**

End-Date of Record:

Part III: Traffic Control Device Information

Signs:

Crossbucks: **4**
Advanced Warning: **Yes**
Pavement Markings: **Stop Lines and RR Xing Symbols**

Highway Stop Signs: **0**
Hump Crossing Sign: **No**
Other Signs: **2** Specify: **3 TRACKS**
2 **OTHRSTPSGN**

Train Activated Devices:

Gates: **2**
Mast Mounted FL: **4**
Cantilevered FL (Over): **2**
Other Flashing Lights: **0**
Highway Traffic Signals: **0**
Other Train Activated Warning Devices:
Channelization:
Track Equipped with Train Signals? **Yes**

4 Quad or Full Barrier: **Yes**
Total Number FL Pairs: **9**
Cantilevered FL (Not over): **0**
Specify Other Flashing Lights:
Wigwags: **0** Bells: **4**
Special Warning Devices Not Train Activated:
Type of Train Detection: **Constant Warning Time**
Traffic Light **Advance Preemption**
Interconnection/Preemption:

Part IV: Physical Characteristics

Type of Development: **Commercial**
Number of Traffic Lanes Crossing Railroad: **2**
Is Highway Paved? **Yes**
Crossing Surface: **Concrete**
Nearby Intersecting Highway? **Less than 75 feet**
Does Track Run Down a Street? **No**
Is Commercial Power **Yes**

Smallest Crossing Angle: **60 to 90 Degrees**
Are Truck Pullout Lanes Present? **No**
If Other:
Is it Signalized? **Yes**
Is Crossing Illuminated? **No**

Part V: Highway Information

Highway System: **Other FA Highway - Not NHS**
Is Crossing on State Highway System: **No**
Annual Average Daily Traffic (AADT): **007642**
Estimated Percent Trucks: **40**
Posted Highway Speed: **0**

Functional Classification of Road at Crossing: **Urban Collector**
AADT Year: **2003**
Avg. No of School Buses per Day: **0**

U.S. DOT - CROSSING INVENTORY INFORMATION
AS OF 7/22/2009

Crossing No.: **025132G** Update Reason: **Changed Crossing** Effective Begin-Date of Record: **08/17/06**
Railroad: **BNSF BNSF Rwy Co. [BNSF]** End-Date of Record:
Initiating Agency **Railroad** Type and Position: **Public At Grade**

Part I Location and Classification of Crossing

Division:	SOUTHWEST	State:	AZ
Subdivision:	SELIGMAN	County:	COCONINO
Branch or Line Name:	E WINSL-NEEDLES	City:	In FLAGSTAFF
Railroad Milepost:	0344.16	Street or Road Name:	SAN FRANCISCO ST
Railroad I.D. No.:	7200	Highway Type & No.:	
Nearest RR Timetable Str:	FLAGSTAFF	HSR Corridor ID:	
Parent Railroad:		County Map Ref. No.:	35A
Crossing Owner:		Latitude:	35.1968505
ENS Sign Installed:		Longitude:	-111.6482409
Passenger Service:	AMTRAK	Lat/Long Source:	Actual
Avg Passenger Train Count:	2	Quiet Zone:	No
Adjacent Crossing with Separate Number:			

Private Crossing Information:

Category:		Public Access:	Unknown
Specify Signs:		Specify Signals:	
ST/RR A	ST/RR B	ST/RR C	ST/RR D
Railroad Use:			
State Use:			
Narrative:			

Emergency Contact: **(800)832-5452** Railroad Contact: **(913)551-4540** State Contact:

Part II Railroad Information

Number of Daily Train Movements:		Less Than One Movement Per Day:	No
Total Trains: 93	Total Switching: 0	Day Thru:	47
Typical Speed Range Over Crossing: From 1 to 45 mph		Maximum Time Table Speed:	45
Type and Number of Tracks: Main: 2 Other: 1		Specify:	SIDING
Does Another RR Operate a Separate Track at Crossing?	No		
Does Another RR Operate Over Your Track at Crossing?	Yes: ATK		

U.S. DOT - CROSSING INVENTORY INFORMATION

Crossing **025132G**

Continued

Effective Begin-Date of Record: **08/17/06**

End-Date of Record:

Part III: Traffic Control Device Information

Signs:

Crossbucks:	4	Highway Stop Signs:	0
Advanced Warning:	Yes	Hump Crossing Sign:	No
Pavement Markings:	Stop Lines and RR Xing Symbols	Other Signs:	2 Specify: DIRECTINAL
			0

Train Activated Devices:

Gates:	2	4 Quad or Full Barrier:	Yes
Mast Mounted FL:	6	Total Number FL Pairs:	9
Cantilevered FL (Over):	1	Cantilevered FL (Not over):	0
Other Flashing Lights:	0	Specify Other Flashing Lights:	
Highway Traffic Signals:	0	Wigwags:	0 Bells: 4
Other Train Activated Warning Devices:		Special Warning Devices Not Train Activated:	
Channelization:		Type of Train Detection:	Constant Warning Time
Track Equipped with Train Signals?	Yes	Traffic Light Interconnection/Preemption:	Advance Preemption

Part IV: Physical Characteristics

Type of Development:	Commercial	Smallest Crossing Angle:	60 to 90 Degrees
Number of Traffic Lanes Crossing Railroad:	3	Are Truck Pullout Lanes Present?	No
Is Highway Paved?	Yes	If Other:	
Crossing Surface:	Concrete	Is it Signalized?	Yes
Nearby Intersecting Highway?	76 to 200 feet	Is Crossing Illuminated?	No
Does Track Run Down a Street?	No		
Is Commercial Power	Yes		

Part V: Highway Information

Highway System:	Other FA Highway - Not NHS	Functional Classification of Road at Crossing:	Urban Collector
Is Crossing on State Highway System:	No		
Annual Average Daily Traffic (AADT):	007978	AADT Year:	2003
Estimated Percent Trucks:		Avg. No of School Buses per Day:	0
Posted Highway Speed:	0		

U.S. DOT - CROSSING INVENTORY INFORMATION
AS OF 7/22/2009

Crossing No.: **025131A** Update Reason: **Changed Crossing** Effective Begin-Date of Record: **08/17/06**
Railroad: **BNSF BNSF Rwy Co. [BNSF]** End-Date of Record:
Initiating Agency **Railroad** Type and Position: **Public At Grade**

Part I Location and Classification of Crossing

Division:	SOUTHWEST	State:	AZ
Subdivision:	SELIGMAN	County:	COCONINO
Branch or Line Name:	E WINSL-NEEDLES	City:	In FLAGSTAFF
Railroad Milepost:	0342.93	Street or Road Name:	ENTERPRISE RD.
RailRoad I.D. No.:	7200	Highway Type & No.:	FAU9012
Nearest RR Timetable Str:	FLAGSTAFF	HSR Corridor ID:	
Parent Railroad:		County Map Ref. No.:	41
Crossing Owner:		Latitude:	35.1947847
ENS Sign Installed:		Longitude:	-111.6281883
Passenger Service:	AMTRAK	Lat/Long Source:	Actual
Avg Passenger Train Count:	2	Quiet Zone:	No
Adjacent Crossing with Separate Number:			

Private Crossing Information:

Category:		Public Access:	Unknown
Specify Signs:		Specify Signals:	
ST/RR A	ST/RR B	ST/RR C	ST/RR D
Railroad Use:			
State Use:			
Narrative:			

Emergency Contact: **(800)832-5452** Railroad Contact: **(913)551-4540** State Contact:

Part II Railroad Information

Number of Daily Train Movements:		Less Than One Movement Per Day:	No
Total Trains: 97	Total Switching: 4	Day Thru:	47
Typical Speed Range Over Crossing: From 1 to 55 mph		Maximum Time Table Speed:	55
Type and Number of Tracks: Main: 2 Other: 2		Specify:	SIDING-SPU
Does Another RR Operate a Separate Track at Crossing?	No		
Does Another RR Operate Over Your Track at Crossing?	Yes: ATK		

U.S. DOT - CROSSING INVENTORY INFORMATION

Crossing **025131A**

Continued

Effective Begin-Date of Record: **08/17/06**

End-Date of Record:

Part III: Traffic Control Device Information

Signs:

Crossbucks: **6**
Advanced Warning: **Yes**
Pavement Markings: **Stop Lines and RR Xing Symbols**

Highway Stop Signs: **0**
Hump Crossing Sign:
Other Signs: **1** Specify: **DIRECTIONAL**
2 **W/O 2**

Train Activated Devices:

Gates: **4**
Mast Mounted FL: **9**
Cantilevered FL (Over): **2**
Other Flashing Lights: **0**
Highway Traffic Signals: **0**
Other Train Activated Warning Devices:
Channelization:
Track Equipped with Train Signals? **Yes**

4 Quad or Full Barrier: **Yes**
Total Number FL Pairs: **16**
Cantilevered FL (Not over): **0**
Specify Other Flashing Lights:
Wigwags: **0** Bells: **2**
Special Warning Devices Not Train Activated:
Type of Train Detection: **DC/AFO**
Traffic Light **Advance Preemption**
Interconnection/Preemption:

Part IV: Physical Characteristics

Type of Development: **Industrial**
Number of Traffic Lanes: **5**
Crossing Railroad:
Is Highway Paved? **Yes**
Crossing Surface: **Concrete**
Nearby Intersecting Highway? **76 to 200 feet**
Does Track Run Down a Street? **No**
Is Commercial Power **Yes**

Smallest Crossing Angle: **60 to 90 Degrees**
Are Truck Pullout Lanes Present? **No**
If Other:
Is it Signalized? **Yes**
Is Crossing Illuminated?

Part V: Highway Information

Highway System: **Other FA Highway - Not NHS**
Is Crossing on State Highway System: **No**
Annual Average Daily Traffic (AADT): **020836**
Estimated Percent Trucks: **38**
Posted Highway Speed: **0**

Functional Classification of Road at Crossing: **Urban Minor Arterial**
AADT Year: **2003**
Avg. No of School Buses per Day: **0**

U.S. DOT - CROSSING INVENTORY INFORMATION
AS OF 7/22/2009

Crossing No.: **025099J** Update Reason: **Changed Crossing** Effective Begin-Date of Record: **08/01/07**
Railroad: **BNSF BNSF Rwy Co. [BNSF]** End-Date of Record:
Initiating Agency **Railroad** Type and Position: **Public At Grade**

Part I Location and Classification of Crossing

Division:	SOUTHWEST	State:	AZ
Subdivision:	SELIGMAN	County:	COCONINO
Branch or Line Name:	E WINSL-NEEDLES	City:	In FLAGSTAFF
Railroad Milepost:	0341.19	Street or Road Name:	STEVES BLVD.
RailRoad I.D. No.:	7200	Highway Type & No.:	
Nearest RR Timetable Stn:	FLAGSTAFF	HSR Corridor ID:	
Parent Railroad:		County Map Ref. No.:	S40
Crossing Owner:		Latitude:	35.2102941
ENS Sign Installed:		Longitude:	-111.6048873
Passenger Service:	AMTRAK	Lat/Long Source:	Actual
Avg Passenger Train Count:	2	Quiet Zone:	No
Adjacent Crossing with Separate Number:			

Private Crossing Information:

Category:	Public Access:	Unknown	
Specify Signs:	Specify Signals:		
ST/RR A	ST/RR B	ST/RR C	ST/RR D
Railroad Use:			
State Use:			
Narrative:			

Emergency Contact: **(800)832-5452** Railroad Contact: **(913)551-4540** State Contact:

Part II Railroad Information

Number of Daily Train Movements:	Less Than One Movement Per Day:	No
Total Trains: 93 Total Switching: 0	Day Thru:	47
Typical Speed Range Over Crossing: From 1 to 55 mph	Maximum Time Table Speed:	55
Type and Number of Tracks: Main: 2 Other 0	Specify:	
Does Another RR Operate a Separate Track at Crossing?	No	
Does Another RR Operate Over Your Track at Crossing?	Yes: ATK	

U.S. DOT - CROSSING INVENTORY INFORMATION

Crossing **025099J**

Continued

Effective Begin-Date of Record: **08/01/07**

End-Date of Record:

Part III: Traffic Control Device Information

Signs:

Crossbucks: **2**
Advanced Warning: **Yes**
Pavement Markings: **RR Xing Symbols**

Highway Stop Signs: **0**
Hump Crossing Sign: **No**
Other Signs: **1** Specify: **W/O 2**
1 **DIRECTIONA**

Train Activated Devices:

Gates: **2**
Mast Mounted FL: **2**
Cantilevered FL (Over): **2**
Other Flashing Lights: **0**
Highway Traffic Signals: **0**
Other Train Activated
Warning Devices:
Channelization:
Track Equipped with
Train Signals? **Yes**

4 Quad or Full Barrier: **No**
Total Number FL Pairs: **8**
Cantilevered FL (Not over): **0**
Specify Other Flashing Lights:
Wigwags: **0** Bells: **2**
Special Warning Devices Not
Train Activated:
Type of Train Detection: **DC/AFO**
Traffic Light
Interconnection/Preemption: **Simultaneous Preemption**

Part IV: Physical Characteristics

Type of Development: **Commercial**
Number of Traffic Lanes
Crossing Railroad: **4**
Is Highway Paved? **Yes**
Crossing Surface: **Concrete**
Nearby Intersecting
Highway? **76 to 200 feet**
Does Track Run Down a
Street? **No**
Is Commercial Power **Yes**

Smallest Crossing Angle: **60 to 90 Degrees**
Are Truck Pullout Lanes Present? **No**
If Other:
Is it Signalized? **Yes**
Is Crossing Illuminated? **No**

Part V: Highway Information

Highway System: **Other FA Highway - Not NHS**
Is Crossing on State
Highway System: **No**
Annual Average Daily
Traffic (AADT): **011028**
Estimated Percent Trucks: **05**
Posted Highway Speed: **0**

Functional Classification of
Road at Crossing: **Urban Collector**
AADT Year: **2002**
Avg. No of School Buses per Day: **0**

U.S. DOT - CROSSING INVENTORY INFORMATION
AS OF 7/22/2009

Crossing No.: **025129Y** Update Reason: **Changed Crossing** Effective Begin-Date of Record: **08/01/07**
Railroad: **BNSF BNSF Rwy Co. [BNSF]** End-Date of Record:
Initiating Agency **Railroad** Type and Position: **Public At Grade**

Part I Location and Classification of Crossing

Division:	SOUTHWEST	State:	AZ
Subdivision:	SELIGMAN	County:	COCONINO
Branch or Line Name:	E WINSL-NEEDLES	City:	In FLAGSTAFF
Railroad Milepost:	0340.55	Street or Road Name:	FANNING DRIVE
RailRoad I.D. No.:	7200	Highway Type & No.:	
Nearest RR Timetable Stn:	FLAGSTAFF	HSR Corridor ID:	
Parent Railroad:		County Map Ref. No.:	38
Crossing Owner:		Latitude:	35.2153902
ENS Sign Installed:		Longitude:	-111.5952922
Passenger Service:	AMTRAK	Lat/Long Source:	Actual
Avg Passenger Train Count:	2	Quiet Zone:	No
Adjacent Crossing with Separate Number:			

Private Crossing Information:

Category: Public Access: **Unknown**
Specify Signs: Specify Signals:

	ST/RR A	ST/RR B	ST/RR C	ST/RR D
Railroad Use:				
State Use:				
Narrative:				

Emergency Contact: **(800)832-5452** Railroad Contact: **(913)551-4540** State Contact:

Part II Railroad Information

Number of Daily Train Movements:		Less Than One Movement Per Day:	No
Total Trains: 93	Total Switching: 0	Day Thru:	47
Typical Speed Range Over Crossing: From 1 to 55 mph		Maximum Time Table Speed:	55
Type and Number of Tracks: Main: 2 Other: 0		Specify:	
Does Another RR Operate a Separate Track at Crossing?		No	
Does Another RR Operate Over Your Track at Crossing?		Yes: ATK	

U.S. DOT - CROSSING INVENTORY INFORMATION

Crossing **025129Y**

Continued

Effective Begin-Date of Record: **08/01/07**

End-Date of Record:

Part III: Traffic Control Device Information

Signs:

Crossbucks: **2**
Advanced Warning: **Yes**
Pavement Markings: **Stop Lines and RR Xing Symbols**

Highway Stop Signs: **0**
Hump Crossing Sign:
Other Signs: **1** Specify: **W/O 2**
1 **DIRECTIONA**

Train Activated Devices:

Gates: **2**
Mast Mounted FL: **2**
Cantilevered FL (Over): **2**
Other Flashing Lights: **0**
Highway Traffic Signals: **0**
Other Train Activated Warning Devices:
Channelization:
Track Equipped with Train Signals? **Yes**

4 Quad or Full Barrier: **No**
Total Number FL Pairs: **6**
Cantilevered FL (Not over): **0**
Specify Other Flashing Lights:
Wigwags: **0** Bells: **2**
Special Warning Devices Not Train Activated:
Type of Train Detection: **DC/AFO**
Traffic Light **Advance Preemption**
Interconnection/Preemption:

Part IV: Physical Characteristics

Type of Development: **Commercial**
Number of Traffic Lanes Crossing Railroad: **4**
Is Highway Paved? **Yes**
Crossing Surface: **Concrete**
Nearby Intersecting Highway? **76 to 200 feet**
Does Track Run Down a Street? **No**
Is Commercial Power **Yes**

Smallest Crossing Angle: **60 to 90 Degrees**
Are Truck Pullout Lanes Present? **No**
If Other:
Is it Signalized? **Yes**
Is Crossing Illuminated? **No**

Part V: Highway Information

Highway System: **Non-Federal-aid**
Is Crossing on State Highway System: **No**
Annual Average Daily Traffic (AADT): **008101**
Estimated Percent Trucks: **40**
Posted Highway Speed: **0**

Functional Classification of Road at Crossing: **Urban Local**
AADT Year: **2003**
Avg. No of School Buses per Day: **0**

ATTACHMENT B

Chris Watson

From: Robert AH Travis II [RTravis@azdot.gov]
Sent: Monday, July 13, 2009 11:39 AM
To: 'Randy Whitaker'
Cc: Chris Watson; Brian Lehman
Subject: RE: Flagstaff Arizona, Quiet Zone
Attachments: Quiet zone inventory instructions.pdf

Good day Randy,

Per our phone conversation, here are the answers to your questions:

1. In the past, ADOT and others interpreted that a one way street with gates and/or medians with gates were equivalent to a 4 quadrant gate system/ barrier gates. Per my discussion with the FRA Highway rail crossing safety Engineer, Tom Woll, this is incorrect and is a common misconception around the country. For example, they gave me a list of 25 crossings from Arizona that were incorrectly shown being 4 quadrant/barrier, when in effect, most of them were one way streets or 2 way street with medians and gates. I have been instructed to note a 1 way street/ median with gates as NOT being 4 quad, and in the narrative section, say what is happening.
2. FRA is revising their inventory sheets (last version is from 1999) so that the inventory will directly state if the crossing is protected by 4 quad gates, 2 quad, medians / one way street with gates, etc.
3. Railroad inventory sheets can be updated by the State DOT (in the case of Arizona, that is myself) or by the Railroad only. Local governments can provide the information to ADOT or the RR, we must agree to it and we will then forward the info to the FRA for inclusion into the nationwide database. This information update takes about 2-3 months. After that time, the FRA calculators will also be updated.
4. Inventory updates are made whenever there is a change to the info at the crossing. Most of the updates are done by the railroad. Per the 2008 Rail Safety Act, I will need to update all of the public road and pedestrian crossing inventory information statewide. I have 2 target dates with all crossing information updated by October 2010.
5. Accident information is shown on the FRA database. This information comes from reports submitted by the railroad and/or State. I have not dealt with this information, but I believe it captures nature of the accident (ped vs. vehicle) and severity of damage/ injury

Enclosed is a new FRA guidance on local governments doing crossing inventory updates. Lets talk about it later in the week and get a plan together on how to do the update and get the information to the people who need it.

Thanks

From: Randy Whitaker [mailto:RWhitaker@flagstaffaz.gov]
Sent: Monday, July 13, 2009 8:52 AM
To: Robert AH Travis II
Subject: RE: Flagstaff Arizona, Quiet Zone

7/24/2009

Robert

First, let me say these are questions that the judicial judge had at the ACC hearing. Unfortunately after the fact I remembered a conversation with the design engineer several years ago and I think I know the answer but:

On the inventory sheets for Beaver and San Francisco, under the Traffic Control Device Information section, it indicates "4 Quad or Full Barrier"- Yes.

These are one way street so gates on one side would be a full Barrier?

Is there any where on the form that would indicate one way sheets.

I noted that at Beaver San Francisco and Enterprise that the Date of record is 08/17/06. At Fanning and Steves the Date of Record is 08/01/07. Is there notes on who gave the update information. I think Barry Gondron (Gannett Fleming, Design Engineer) was involved in the 2006 update?

How is the determination made to update the records?

Is ADOT the only agency that has access to update the records?

When you create a new quiet zone on the FRA quiet zone calculator it pulls information directly from this data base? It seems to.

The inventory form does not have any accident information on it. Do you know where accident information is compiled and how it is feed into the FRA quiet zone calculator?

Does it contain pedestrian accident information?

Talk to you later, thanks

Randy

From: Robert AH Travis II [mailto:RTravis@azdot.gov]
Sent: Thursday, July 09, 2009 5:40 PM
To: Randy Whitaker
Subject: RE: Flagstaff Arizona, Quiet Zone

Sorry about that. I will give you a call on Monday. What would be a good time?

Also, do you have a general question about crossing inventories? Or specific about the Flagstaff quiet zone crossings?

On 7/9/2009, at 5:40 PM, Robert AH Travis II wrote:
 I am sorry about that. I will give you a call on Monday. What would be a good time?
 Also, do you have a general question about crossing inventories? Or specific about the Flagstaff quiet zone crossings?

From: Randy Whitaker [mailto:RWhitaker@flagstaffAZ.gov]
Sent: Thursday, July 09, 2009 10:24 AM
To: Robert AH Travis II
Subject: RE: Flagstaff Arizona, Quiet Zone

Works for me I am here now 10:24

7/24/2009

From: Robert AH Travis II [mailto:RTravis@azdot.gov]
Sent: Thursday, July 09, 2009 9:30 AM
To: Randy Whitaker
Cc: 'Thomas, Melvin V'; 'Brian Lehman'; Rick Barrett; Daryl Melvin; David Womochil; 'Chris Watson'
Subject: RE: Flagstaff Arizona, Quiet Zone

I'll give you a call later this am or this afternoon if that works..

From: Randy Whitaker [mailto:RWhitaker@flagstaffaz.gov]
Sent: Thursday, July 09, 2009 9:00 AM
To: Robert AH Travis II
Cc: 'Thomas, Melvin V'; 'Brian Lehman'; Rick Barrett; Daryl Melvin; David Womochil; 'Chris Watson'
Subject: RE: Flagstaff Arizona, Quiet Zone

Robert,
Thanks for letting me know you received the Emails.
We had a judicial hearing with the ACC yesterday and there was some questions regarding the information on the inventory forms. It would be greatly appreciated if I could get your help clarifying a few items. Talk to you first of near week?
Thank You
Randy
928-226-4844

From: Robert AH Travis II [mailto:RTravis@azdot.gov]
Sent: Monday, July 06, 2009 10:46 AM
To: Randy Whitaker; 'Chris Watson'; 'terry.brooks@bnsf.com'; Debbie Jo Maust; 'ralbritton@railroadcontrols.com'; 'Jim Hall'
Cc: 'Thomas, Melvin V'; 'Brian Lehman'; Rick Barrett; Daryl Melvin; David Womochil; 'steelmh@Amtrak.com'; 'wfrobertson@msn.com'
Subject: RE: Flagstaff Arizona, Quiet Zone

I have received all 3 emails. I also received the procedural order and the City of Flagstaff reply to ACC request for additional details.

I will continue to monitor this project, as I will need to re-inventory the modified crossings once the improvements are completed.

7/24/2009

Sent: Monday, July 06, 2009 10:13 AM

Cc: 'Thomas, Melvin V'; 'Brian Lehman'; Rick Barrett; Daryl Melvin; David Womochil; 'steelmh@Amtrak.com';

'wfrobertson@msn.com'; Robert AH Travis II

Subject: RE: Flagstaff Arizona, Quiet Zone

Diagnostic Team or Current Contact,

FYI

Hopefully this size of attachment goes thru OK?

Working with BNSF signal personal there has been some field modifications to the 60% drawings that were sent out with the quiet zone Notice of Intent.

The field modifications are sign and wayside horns locations.

Please note there are no changes to the type of safety measures to create the quiet zone.

I will follow up with a cover letter and 11x 17 hard copy to the appropriate agencies.

If you have any questions or concerns please contact me at

928-226-4844 or by Email

Thank You,

Randy Whitaker

Senior Project t Manger

City of Flagstaff

P.S. Part 2 of 2

ATTACHMENT C

Print This Page

QUIET ZONE CALCULATOR

Federal Railroad Administration
Home | Help | Contact | logoff_cwatson@azcc.gov

Cancel
Change Scenario: FLAGSTAFF_29567
Continue

Create New Zone

Manage Existing Zones

Log Off

Step 1: To specify New Warning Device (For Pre-Rule Quiet Zone Only) and/or SSM, click the MODIFY Button

Step 2: Select proposed warning device or SSM. Then click the UPDATE button. To generate a spreadsheet of the values on this page, click on ASM button—This spreadsheet can then be used for ASM calculations.

Step 3: Repeat Step (2) until the SELECT button is shown at the bottom right side of this page. Note that the SELECT button is shown ONLY when the Quiet Zone Risk Index falls below the NSRT or the Risk Index with Horn.

Step 4: To save the scenario and continue, click the SELECT button

Crossing	Street	Traffic Warning Device	Pre-SSM	SSM	Risk	
025099J	STEVES BLVD.	11028 Gates	0	0	82,463.50	MODIFY
025129Y	FANNING DRIVE	8101 Gates	0	0	172,644.58	MODIFY
025131A	ENTERPRISE RD.	20836 Gates	0	0	81,966.70	MODIFY
025132G	SAN FRANCISCO ST	7978 Gates	0	0	218,815.96	MODIFY
025133N	BEAVER ST	7642 Gates	0	0	140,016.07	MODIFY

* Only Public At Grade Crossings are listed.

Click for [Supplementary Safety Measures \[SSM\]](#)

Click for ASM spreadsheet: [ASM](#)

* Note: The use of ASMs requires an application to and approval from the FRA.

Summary

Proposed Quiet Zone:

Type: New 24-hour QZ

Scenario: FLAGSTAFF_29567

Estimated Total Cost: \$0.00

Nationwide Significant Risk Threshold: 17610.00

Risk Index with Horns: 83442.06

Quiet Zone Risk Index: 139181.36

QUIET ZONE CALCULATOR

Federal Railroad Administration

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Cancel

Change Scenario: FLAGSTAFF_29567

Continue

Create New Zone

Manage Existing Zones

Log Off

Crossing Street	Traffic Warning Device	Pre-SSM	SSM Risk	
025099J STEVES BLVD.	11028 Gates	0	0	82,463.50
025129Y FANNING DRIVE	8101 Gates	0	0	172,644.58
025131A ENTERPRISE RD.	20836 Gates	0	0	81,966.70
025132G SAN FRANCISCO ST	7978 Gates	0	14	39,386.87
025133N BEAVER ST	7642 Gates	0	0	140,016.07
				<input type="button" value="MODIFY"/>
				<input type="button" value="MODIFY"/>
				<input type="button" value="MODIFY"/>
				<input type="button" value="MODIFY"/>

Step by Step Instructions:

Step 1: To specify New Warning Device (For Pre-Rule Quiet Zone Only) and/or SSM, click the MODIFY Button

Step 2: Select proposed warning device or SSM. Then click the UPDATE button. To generate a spreadsheet of the values on this page, click on ASM button—This spreadsheet can then be used for ASM calculations.

Step 3: Repeat Step (2) until the SELECT button is shown at the bottom right side of this page. Note that the SELECT button is shown ONLY when the Quiet Zone Risk Index falls below the NSRT or the Risk Index with Horn.

Step 4: To save the scenario and continue, click the SELECT button

* Only Public At Grade Crossings are listed.

Click for Supplementary Safety Measures [SSM]

Click for ASM spreadsheet: ASM

* Note: The use of ASMs requires an application to and approval from the FRA.

Summary

Proposed Quiet Zone:

Type:

Scenario:

Estimated Total Cost:

Nationwide Significant Risk Threshold:

Risk Index with Horns:

Quiet Zone Risk Index:

FLAGSTAFF

New 24-hour QZ

FLAGSTAFF_29567

\$35,000.00

17610 .00

83442.06

103295.54

QUIET ZONE CALCULATOR

Federal Railroad Administration

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Cancel

Change Scenario: FLAGSTAFF_29567

Continue

Create New Zone

Manage Existing Zones

Log Off

Crossing	Street	Traffic	Warning Device	Pre-SSM	SSM	Risk	
025099J	STEVES BLVD.	11028	Gates	0	0	82,463.50	MODIFY
025129Y	FANNING DRIVE	8101	Gates	0	0	172,644.58	MODIFY
025131A	ENTERPRISE RD.	20836	Gates	0	0	81,966.70	MODIFY
025132G	SAN FRANCISCO ST	7978	Gates	0	14	39,386.87	MODIFY
025133N	BEAVER ST	7642	Gates	0	14	25,202.89	MODIFY

Step by Step Instructions:

Step 1: To specify New Warning Device (For Pre-Rule Quiet Zone Only) and/or SSM, click the **MODIFY** Button

Step 2: Select proposed warning device or SSM. Then click the **UPDATE** button. To generate a spreadsheet of the values on this page, click on **ASM** button—This spreadsheet can then be used for ASM calculations.

Step 3: Repeat Step (2) until the **SELECT** button is shown at the bottom right side of this page. Note that the **SELECT** button is shown **ONLY** when the Quiet Zone Risk Index falls below the NSRT or the Risk Index with Horns.

Step 4: To save the scenario and continue, click the **SELECT** button

* Only Public At Grade Crossings are listed.

Summary

ALERT: Quiet Zone qualifies because QZRI is less than Risk Index with Horns.

Click for Supplementary Safety Measures [SSM]

Click for ASM spreadsheet: **ASM**

* Note: The use of ASMs requires an application to and approval from the FRA.

Proposed Quiet Zone:	FLAGSTAFF
Type:	New 24-hour QZ
Scenario:	FLAGSTAFF_29567
Estimated Total Cost:	\$70,000.00
Nationwide Significant Risk Threshold:	17610 .00
Risk Index with Horns:	83442.06
Quiet Zone Risk Index:	80332.91

Select